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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/541,406

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Marcel Johannes Quist

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

COUSO, YON JUNG

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/541,406	<b>Applicant(s)</b> QUIST, MARCEL JOHANNES	
	<b>Examiner</b> Yon Couse	<b>Art Unit</b> 2624	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 July 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/17/07</u> .   | 6) <input type="checkbox"/> Other: _____                          |

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-8 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-8 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent and recent Federal Circuit decisions indicate that a statutory “process” under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process. The method including steps of providing, selecting, performing, comparing, and outputting is of sufficient breadth that it would be reasonably interpreted as a series of steps completely performed mentally, verbally or without a machine. The Applicant has provided no explicit and deliberate definitions of “providing”, “selecting”, “performing”, “comparing”, or “outputting” to limit the steps to the electronic form.

The examiner suggests amending the body of the claims to include a computer or a processor to limit the steps to the electronic form.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 9, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Weng et al (US Patent No. 5,575,286).

As to claim 1, Weng teaches a method of image registration comprising the steps of: providing at least first image data and second image data (column 4, lines 8-20), selecting of sub-volumes of the first and the second image data (column 4, lines 21-36), performing a registration for each one of the sub-volumes, each registration providing a transformation parameter set (column 4, line 46-column 5, line 8), performing a global registration for the first and second image data, the global registration providing a global transformation parameter set (column 8, lines 9-15), comparing one of the transformation parameter sets to other transformation parameter sets and/or to the global transformation parameter set for identification of an outlier transformation parameter set of the transformation parameter sets (column 8, lines 15-30), outputting of a signal being indicative of the sub-volume of the outlier transformation parameter set (column 8, lines 3-33).

As to claim 9, Weng teaches computer program product, in particular digital storage medium, comprising program means for registration of at least first image data and second data, the program means being adapted to perform the steps of: storing of a selection of sub-volumes of the first and second image data (column 4, lines 8-36), performing a registration for each one of the sub-volumes, each registration providing a transformation parameter set (column 4, lines 46-column 5, line 8), performing a global

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registration for the first and second image data, the global registration providing a global transformation parameter set (column 8, lines 9-15), comparing one of the transformation parameter sets to other transformation parameter sets and/or to the global transformation parameter set for identification of an outlier transformation parameter set of the transformation parameter sets (column 8, lines 15-30), outputting of a signal being indicative of the sub-volume of the outlier transformation parameter set (column 8, lines 30-33).

As to claim 10, Weng teaches a medical image data processing apparatus comprising: a memory for a storage of at least first and second image data (column 4, lines 8-36), means for selecting of sub-volumes of the first and second image data (column 4, lines 46-column 5, line 8), means for performing a registration for each one of the sub-volumes and for a global registration of the first and second image data, each registration providing a transformation parameter set (column 8, lines 9-15), means for identification of an outlier transformation parameter set of the transformation parameter sets on the basis of the transformation parameter sets (column 8, lines 15-30), means for outputting of a signal being indicative of the sub-volume of an identified outlier transformation parameter set (column 8, lines 30-33).

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-4 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weng et al (US Patent No. 5,575,286).

The arguments advanced in paragraph 2 above as to the applicability of the reference are incorporated herein.

As to claim 2, Weng does not teach details on the first image data and/or the second image data is provided by X-ray imaging, magnetic resonance imaging, computer tomography imaging, functional MRI, single photon emission computer tomography or positron emission tomography. However, Weng clearly teaches an ultrasonic image which is also a medical imaging technique. The method taught in Weng would be also applicable to X-ray imaging, magnetic resonance imaging, computer tomography imaging, functional MRI, single photon emission computer tomography or positron emission tomography. It would have been obvious to one of ordinary skill in the art to incorporate the technique taught in Weng into the other medical imaging systems such as X-ray imaging, magnetic resonance imaging, computer tomography imaging, functional MRI, single photon emission computer tomography or positron emission tomography

As to claims 3 and 4, Weng does not teach details on the selection of the sub-volumes is performed manually by means of a graphical user interface or performed by means of an image segmentation step. However, Weng clearly teaches selection of the sub-volumes at column 4, lines 21-36. Incorporation of other well-known techniques such as selection of the sub-volumes is performed manually by means of a graphical user interface or performed by means of an image segmentation step would have been

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a matter of simple design choice for one of ordinary skill in the art at the time the invention was made.

For claims 11 and 12, see claims 3 and 4 above.

4. Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chen et al and Hossack et al are also cited

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yon Couso whose telephone number is (571) 272-7448. The examiner can normally be reached on Monday through Friday from 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta, can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Yon Couso/

Primary Examiner, Art Unit 2624

December 9, 2009